



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,125	12/29/2000	Mitsuhiro Kanada	Q62454	6746
7590	04/13/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			CHANG, VICTOR S	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,125

Applicant(s)

KANADA ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 3/5/2004. Applicants' amendments to claim 1, cancellation of claims 13-15, and newly added claim 17 have all been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Response to Amendment

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/47573 either individually, or in view of admitted prior art, and further in view of Nakae et al. (US 4353817), substantially for the reasons set forth in sections 4 and 5 of Paper No. 120103, together with the following additional observations.

It is noted that claim 1 has been substantially newly amended to incorporate the elements of cancelled claims 13-15: a flame retardant comprising a hydrated metal compound represented by formula $m(M_aO_b)_n(Q_dO_e) \cdot cH_2O$, wherein M and Q represent different metal elements and Q is a metal element belonging to a group selected from Groups IVa, Va, VIa, VIIa, VIII, Ib, and IIb of the periodic table; and m, n, a, b, c, d, and e may be the same or different and each is a positive number. Also, in newly added claim 17, the flame retardant is $MgO \cdot ZnO \cdot H_2O$.

Art Unit: 1771

With respect to Applicants' response arguing that "WO '573 does not contain any disclosure to teach or suggest that use of a specific composite metal hydroxide ... improves flame retardancy without deterioration of fine foamability" (Remarks, page 6, second paragraph), the Examiner repeats (see Paper No. 5, page 4) that it is noted that WO '573 lacks a specific teaching of using hydrated metal compound as flame retardant. However, it is noted that Nakae's invention is directed to a polyolefin resin composition which has high flame retardancy and sufficient tensile elongation for practical application, and is adapted to be used as a raw material for a field in which high flame retardancy is demanded such as a foamed product (Abstract), and by adding a hydrated metal oxide to a polymer blend such as polyethylene and ethylene-based copolymer preserves a synergetic high flame retardancy, extensibility, and high foam properties (column 2, lines 52 to column 3, line 11). Nakae also discloses that the hydrated metal oxide has a general structural formula $M_mO_n \cdot xH_2O$, for example, magnesium hydroxide ($MgO \cdot H_2O$ or $Mg(OH)_2$), etc. (column 7, lines 21-37). Further, regarding the use of a "composite" (mixture) metal hydroxides, such as $MgO \cdot ZnO \cdot H_2O$ in newly added claim 17, the Examiner notes that, in the absence of unexpected results, it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art. See MPEP § 2144.06. As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art of polyolefin foams to modify WO '573 by incorporating a suitable amount of metal

Art Unit: 1771

hydroxides in the polyolefin foams, as taught by Nakae, motivated by the desire to improve the flame retardancy of the polyolefin foams.

With respect to Applicants' numerous arguments against Nakae individually (Remarks, page 6, bottom paragraph), the Examiner respectfully asserts that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Finally, the Examiner notes that the phrase "soundproofing" in claim 1, line 1, has not been given patentable weight, because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1771

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1300-
1700

Daniel Zinker